networks@work

Quick Install Guide

Wireless-G 54Mbps XR™
Access Point
(Compatible with Compex PoE Injector)

WP54G 1a

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1: Introduction

The Compex WP54G Wireless-G 54Mbps XR™ Managed Access Point is a high-performance AP that is designed for enterprise and public access applications. Embedded with the Atheros chipset, it boasts network robustness and stability and wider network coverage. Based on 802.11g, it can support transfer speeds 5X faster than 802.11b. WP54G supports high-speed data transmission of up to 54Mbps in the 2.4GHz frequency band.

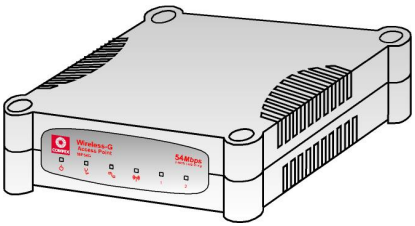
WP54G is capable of operating in several different modes, which makes it suitable for a wide variety of wireless applications, including long-distance deployment. Equipped with an SMA connector for external antenna support WP54G provides a wider coverage for your network. Moreover, its integrated Power over Ethernet (PoE) allows WP54G to be used in areas where power outlets are not readily available.

To protect your security and privacy, WP54G is armed with many enhanced wireless security features such as Wi-Fi Protected Access (WPA), WPA2 (with Advanced Encryption Standard encryption) MAC Address Filtering, IEEE 802.1x Authentication and 64/128-bit WEP (Wired Equivalent Privacy) to ensure privacy for the heterogeneous mix of users within the same wireless LAN.

WP54G also incorporates unique features such as – the Parallel Broadband feature that allows bandwidth aggregation and fail-over redundancy capability; Wireless Distribution System (WDS) to wirelessly link all associated access points together; Long-Range parameter setting which provides WP54G with the ability to auto-calculate parameters such as slot time, ACK time-out and CTS time-out to achieve a longer range; Spanning Tree Protocol (STP) which provides the wireless network with extra redundancy and reliability which the network will auto-reconfigure when there are changes to the network connections; Pseudo VLAN feature which enables the creation of wireless isolated nodes or workgroups of wireless clients to increase network privacy in a wireless LAN.

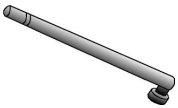
Packaging Content

Actual product appearance may slightly differ depending on the hardware version.



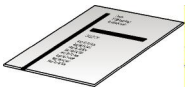
1 x Compex WP54G

1 x Power Adapter



1 x Antenna

1 x Product CD



1 x Read-Me-First Note

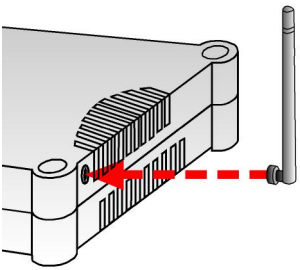
2: Let's Get Going-Hardware Setup

Compex WP54G can be powered using either the power adapter provided or the Compex PoE Injector. The installation process for both options is described below.

Method One: Using power adapter to supply power to the unit

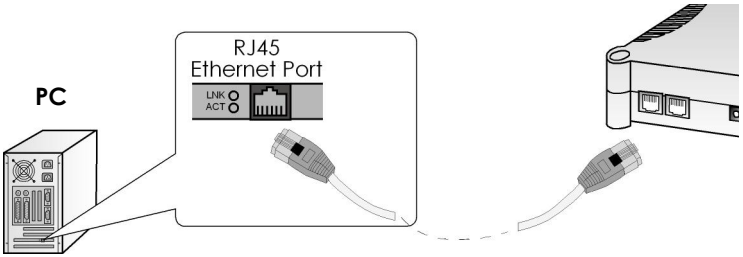
Step 1

Connect the external antenna to the SMA connector of Compex WP54G.



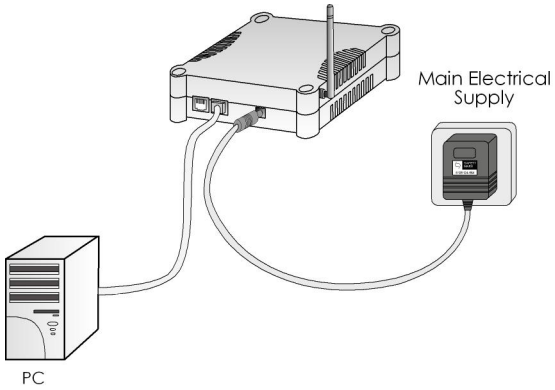
Step 2

Insert one end of the RJ45 Ethernet cable to any of the LAN ports on your Compex WP54G, and the other end of the cable to your PC's Ethernet network adapter.



Step 3

Attach the power adapter to the main electrical supply, and connect the power plug into the socket of the Compex WP54G.



Step 4

Power ON your PC. Notice that the **Power** and Port **1** or **2** (depending on which port you have connected the RJ45 Ethernet cable to) LEDs have lighted up. This indicates that the connection has been established successfully between your Compex WP54G and your PC.

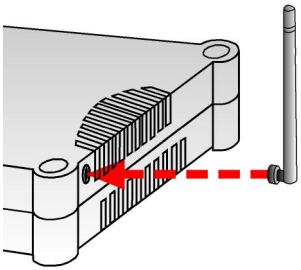
Method Two: Using Compex PoE to supply power to the unit

Compex Power-Over-Ethernet (PoE) is fully compatible with our Compex WP54G. This accessory supplies operational power to the wireless AP via the Ethernet cable connection.

Users who have already purchased the Compex PoE and who wish to use it to supply power to the Compex WP54G may follow the installation procedures as shown below:

Step 1

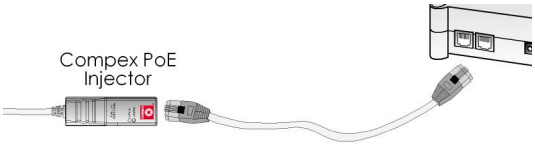
Connect the external antenna to the SMA connector of Compex WP54G.



Step 2

Use an RJ45 Ethernet cable to connect one end of the cable to the Ethernet socket of the Injector and the other end to one of the LAN ports of Compex WP54G.

Warning:
When one port is used for PoE, the other port cannot connect to any other network device.

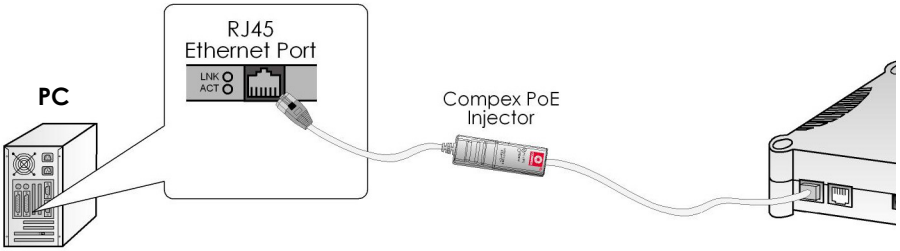


Maximum length of the RJ45 Category 5 cable is 100 metres.

Step 3

Next, connect the RJ45 Ethernet cable attached to the Compex PoE Injector to your PC's Ethernet network adapter.

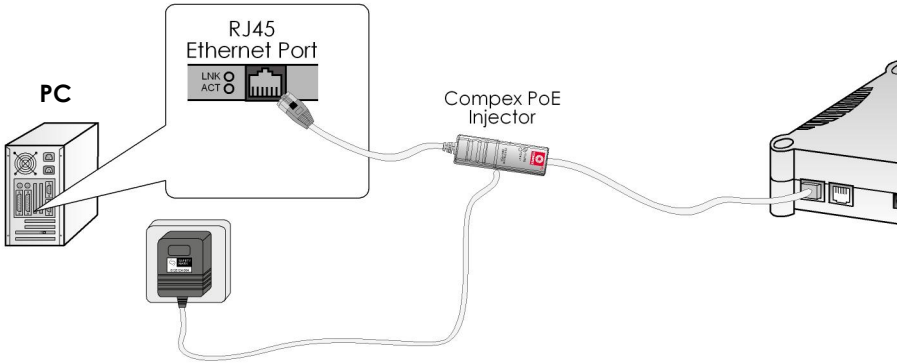
Once you have finished configuring your WP54G, you can connect the PoE Injector's RJ45 Ethernet cable to your network device, such as to a switch or hub.



Step 4

Connect the power adapter supplied in the Compex PoE kit to the main electrical supply and the power plug into the socket of the injector.

Note:
The voltage and current supplied to the Compex WP54G power adapter and the Compex PoE kit power adapter are different. Do not interchange the power adapters.



Step 5

Now, turn on your power supply. Notice that the **Power** and **Port 2** (according to the picture illustration) LEDs have lighted up. This indicates that the WP54G is receiving power through the Compex PoE Injector and that connection between Compex WP54G and your PC has been established.

3: Access to Web-based Interface

There are two methods to access to the web-based interface of Compex WP54G:

1. Through the Compex Utility – uConfig
   You can access to the web-based interface directly without having to change the IP address of your PC.

2. Through your web browser
   First, you will need to assign an IP address to your PC, such as 192.168.168.xxx, where x can be any value from 2 to 254, so that it is in the same subnet as Compex WP54G. Then, enter IP address of Compex WP54G in the address bar of Internet Explorer and press **Enter**.

Access to the Web interface with uConfig

Compex has developed a powerful uConfig utility that provides hassle-free access to the web-based configuration page.

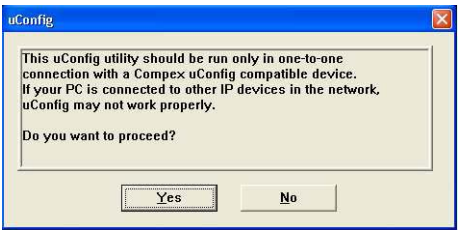
Step 1

Insert the Product CD into your CD-ROM drive.

Step 2

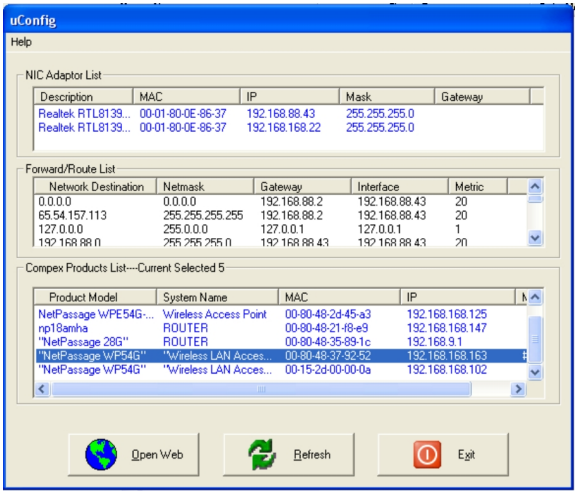
From the **Utilities** section, select to install the **uConfig** utility to your hard disk.

When the utility has been installed, double-click on the **uConfig** icon. The following screen will appear, click on the **Yes** button to proceed.


uConfig
This uConfig utility should be run only in one-to-one connection with a Compex uConfig compatible device.
If your PC is connected to other IP devices in the network, uConfig may not work properly.
Do you want to proceed?
Yes
No

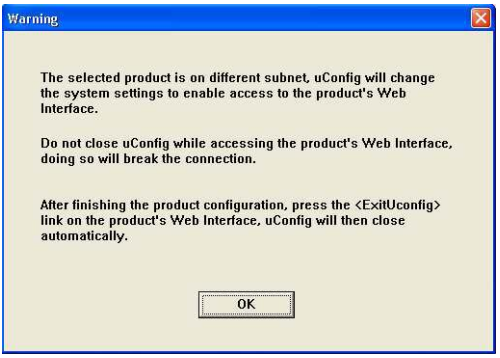
Step 3

Select *NetPassage WP54G* in the **Compex Products List** section and click on the **Open Web** button. To retrieve and display the available device(s) in the list, click on the **Refresh** button.


uConfig
Help
NIC Adaptor List
Description MAC IP Mask Gateway
Realtek RTL8139... 00-01-80-0E-86-37 192.168.88.43 255.255.255.0
Realtek RTL8139... 00-01-80-0E-86-37 192.168.168.22 255.255.255.0
Forward/Route List
Network Destination Netmask Gateway Interface Metric
0.0.0.0 0.0.0.0 192.168.88.2 192.168.88.43 20
65.54.157.113 255.255.255.255 192.168.88.2 192.168.88.43 20
127.0.0.0 255.0.0.0 127.0.0.1 127.0.0.1 1
Compex Products List----Current Selected 5
Product Model System Name MAC IP
NetPassage WPE54G-... Wireless Access Point 00-80-48-2d-45-a3 192.168.168.125
np18amha ROUTER 00-80-48-21-f8-e9 192.168.168.147
"NetPassage 28G" ROUTER 00-80-48-35-89-1c 192.168.9.1
"NetPassage WP54G" "Wireless LAN Acces... 00-80-48-37-92-52 192.168.168.163
"NetPassage WP54G" "Wireless LAN Acces... 00-15-2d-00-00-0a 192.168.168.102
Open Web
Refresh
Exit

Step 4

This screen prompts you not to exit your uConfig program while accessing to your web-based interface, or else you will fail to connect to your device. Click on the **OK** button to proceed.

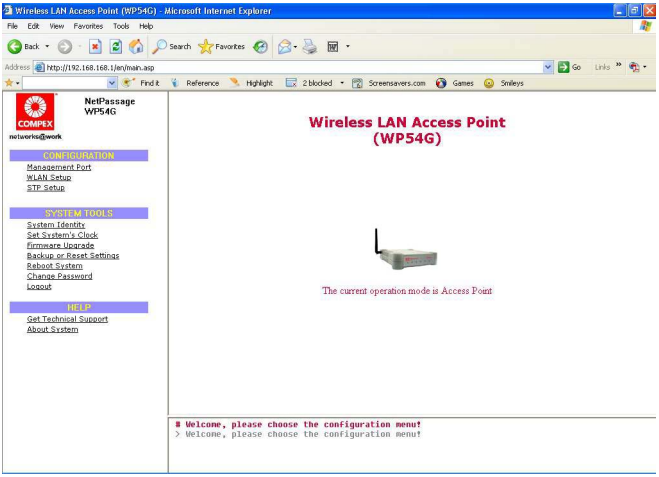

Warning
The selected product is on different subnet, uConfig will change the system settings to enable access to the product's Web Interface.
Do not close uConfig while accessing the product's Web Interface, doing so will break the connection.
After finishing the product configuration, press the <ExitUconfig> link on the product's Web Interface, uConfig will then close automatically.
OK

Step 5

At the authentication page, click on the **LOGIN!** button to enter the main configuration page. The default password is "password".

Wireless LAN Access Point Management
Please enter your password:
LOGIN !
[Forgot your password? - see the User's Guide for instructions]

You will then reach the home page of Compex WP54G's web-based interface.



Note:
Refer to User's Manual for instructions on how to configure Compex WP54G for wireless access.

Access to the Web interface manually

If you wish to access to the web interface manually, you need to configure the TCP/IP of your PC. Refer to User's Manual in the Product CD.

If you have forgotten the IP address of your access point, do not worry! Compex has designed another utility program **NpFind** that helps you verify the IP address of your Compex product. You can also find this utility in the Product CD.

Step 1

From the Product CD, click on **Utilities** and select **NpFind** program to run it.

Once your Compex WP54G has connected to your PC, the program will automatically detect the device and display its IP address.

Step 2

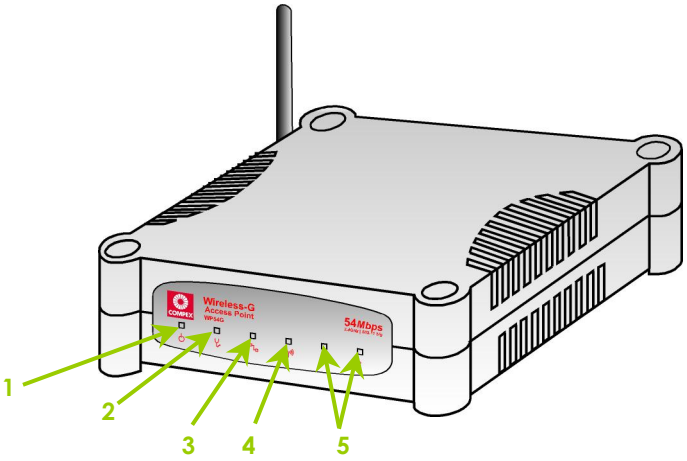
Open your Internet browser, enter http://192.168.168.1 in the address bar and hit the **Enter** key from the keyboard.

You will then reach the home page of Compex WP54G's web-based interface.

Note:
Refer to User's Manual for instructions on how to configure Compex WP54G for wireless access.

4: Panel Views and Descriptions

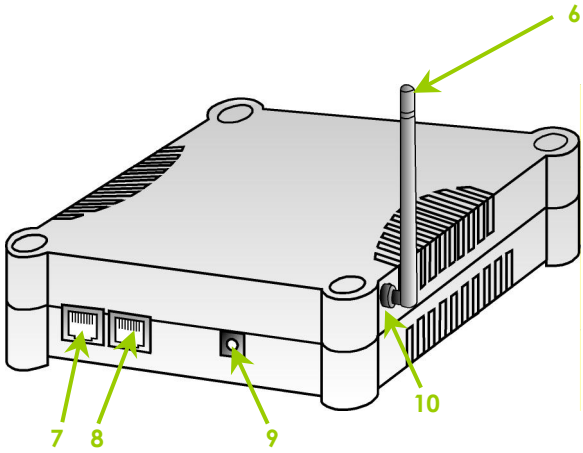
Front View of Compex WP54G



	Name	Description	
1	LED (Power)	Steady Blue	The device is powered up.
		Off	No power is supplied to the device.
2	LED (Diagnostic)	Flashing Green	This indicates the flash during the power-up. The light will go off when the diagnostic is passed.
3	LED (WAN Link/Act)	Steady Green	WAN connection is enabled.
		Flashing Green	Data transmission at WAN connection.
4	LED (WLAN Link/Act LED)	Steady Green	At least one wireless client is present.
		Flashing Green	Activity is detected in the wireless network.

	Name	Description	
5	1 2 LED (Port 1 & 2 LEDs)	Steady Green	Connection has been established between the device and the network.
		Flashing Green	Activity is detected in the network.
		Off	No network connection.

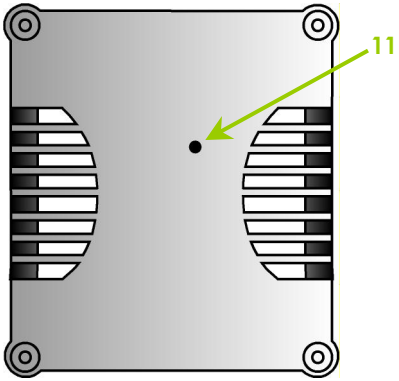
Back View of WP54G



	Name	Description
6	External Antenna	2dBi SMA antenna
7, 8	Ethernet Port 1, 2	Connect to your PC or network hub or switch If using PoE: Connect to PoE injector

	Name	Description
9	DC Jack	Connect to power adapter (if used).
10	Reverse SMA connector	Connect to external SMA antenna.

Bottom View of Compex WP54G



	Name	Description
11	Reset Push button	To reboot, press once. To reset password, press and hold the button for 5 seconds. The DIAG light will flash fast for about 5 flashes/sec before releasing the button. To restore the factory default settings, press and hold the button for more than 10 seconds. The DIAG light will flash slowly for about 10 flashes/sec before releasing the button.

5: Technical Specifications

Safety and Electromagnetic Conformance	◆ FCC Part 15 SubPart B and SubPart C [for wireless module] ◆ EN 300 328-2 [for wireless module] ◆ EMC CE EN 301 489 (EN300 826) [for wireless module] ◆ EN 55022 (CISPR 22)/EN 55024 Class B ◆ EN 61000-3-2 ◆ EN61000-3-3 ◆ CE EN 60950
Industrial Standards	◆ IEEE 802.11b ◆ IEEE 802.11g
Performance	◆ Network speeds dynamically shift between 1,2, 5.5, 11, 12, 18, 24, 36, 48, 54 Mbps ◆ Indoor: 20 m (54 Mbps) ◆ Outdoor: 80 m (54 Mbps)
Frequency Range **IEEE 802.11b:** **IEEE 802.11g:**	 2.4 ~ 2.4835 GHz 2.4 ~ 2.497 GHz
Wireless Operation Modes	• Access Point • Access Point Client • Point to Point • Point to Multiple Point • Wireless Routing Client • Gateway
Security	◆ 64 - bit / 128 - bit WEP ◆ WPA-EAP, WPA-PSK, WPA2-EAP, WPA2-PSK ◆ Pseudo Virtual LAN ◆ Tagged VLAN ◆ IEEE 802.1x – TLS, TTLS, PEAP, EAP-SIM ◆ Wireless MAC address filtering
Network Interface	2 RJ45 10/100 Mbps auto-negotiating Ethernet ports

Modulation Techniques	OFDM (BPSK, QPSK, 16-QAM, 64-QAM), DSSS (BPSK, QPSK, CCK)
Output Power **IEEE 802.11b:** **IEEE 802.11g:**	 20 dBm 19 dBm
Operating Channels	◆ 11 Channels: US and Canada ◆ 13 Channels: Europe ◆ 14 Channels: Japan
Advanced Wireless Features	◆ Wireless Distribution System (WDS) ◆ Long Distance Parameters Setup ◆ Wireless Pseudo VLAN - Per Node - Per Group - Tagged VLAN ◆ Adjustable transmit power control (in 1dB steps)
Antenna	Detachable 2dBi antenna with SMA connector
Management	◆ HTTP Web Management ◆ SNMP - SNMP (RFC1157) - SNMP (RFC1213)
Built-in DHCP Server	Yes
DHCP Reservation	By MAC address
Profile Backup & Restore	Yes
Firmware Upgrade	Yes
Power Requirements **Using Power Adapter:** **Using PoE:**	 ◆ Output 9VDC (localized to country of sale) ◆ Compex PoE Injector
Environment Requirements **Operating Temp:** **Storage Temp:** **Operating Humidity:**	 0ºC to 70ºC -15ºC to 70ºC 5% to 95% RH Humidity (RH – Relative Humidity):

Physical Dimensions	145mm x 132mm x 41mm (H x W x D)

Further Information References

For more details on the WP54G configuration, please refer to the User's Manual in the accompanying Product CD.

This document may become superseded, in which case you may find its latest version at: http://www.compex.com.sg

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Manual Revision by Ann

Manual Number: M-0478-V1.1C Version 1.1, November 2005

FCC NOTICE: This device has been tested and found to comply with the limits for a **Class B** digital device, pursuant to **Part 15 of the FCC Rules**. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Increase the separation between the computer and receiver.
- Consult the dealer or an experienced radio / TV technician for help.

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC Compliance Statement: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Products that contain a radio transmitter are labeled with FCC ID and may also carry the FCC logo.

Caution: Exposure to Radio Frequency Radiation.

To comply with the FCC RF exposure compliance requirements, the following antenna installation and device operating configurations must be satisfied:

a. For configurations using the integral antenna, the separation distance between the antenna(s) and any person's body (including hands, wrists, feet and ankles) must be

b. at least 2.5cm (1 inch).

For configurations using an approved external antenna, the separation distance between the antenna and any person's body (including hands, wrists, feet and ankles) must be at least 20cm (8 inch).

The transmitter shall not be collocated with other transmitters or antennas.

ICES 003 Statement

This Class B digital apparatus complies with Canadian ICES-003.

DECLARATION OF CONFORMITY: *Compex, Inc. declares that the product:*

Product Name: Compex Wireless-G 54Mbps XR™ Access Point

Model No.: WP54G conforms to the following Product Standards:

This device complies with the Electromagnetic Compatibility Directive (89/336/EEC) issued by the Commission of the European Community. Compliance with this directive implies conformity to the following European Norms (in brackets are the equivalent international standards.)

Electromagnetic Interference (Conduction and Radiation): EN 55022 (CISPR 22)

Electromagnetic Immunity: EN 55024 (IEC61000-4-2,3,4,5,6,8,11)

Low Voltage Directive: EN 60 950: 1992+A1: 1993+A2: 1993+A3: 1995+A4: 1996+A11:1997.

Therefore, this product is in conformity with the following regional standards: **FCC Class B:** following the provisions of FCC Part 15 directive; **CE Mark:** following the provisions of the EC directive.

DECLARATION OF CONFORMITY: *Compex, Inc. declares that:*

The wireless card in this product complies with the R&TTE Directive (1999/5/EC) issued by the Commission of the European Community. Compliance with this directive implies conformity to the following:

EMC Standards: FCC: 47 CFR Part 15, Subpart B, 47 CFR Part 15, Subpart C (Section 15.247); CE: EN 300 328-2, EN 300 826 (EN 301 489-17)

Therefore, this product is in conformity with the following regional standards: **FCC Class B**: following the provisions of FCC Part 15 directive; **CE Mark:** following the provisions of the EC directive.

Manufacturer's Name: Compex, Inc.

Address: 840 Columbia Street, Suite B

Brea, CA 92821, USA

WARRANTY REGISTRATION CARD

Register via the Internet at http://www.cpx.com or http://www.compex.com.sg

[M-0088-V2.4C]

To activate the warranty, please complete this card and return to Compex within ninety (90) days from the date of purchase.

Please e-mail this warranty card to **support@compex.com.sg**.

Product:	Purchase Date:	Model:	Serial No:
Name:		E-mail:	
Company:			
Address:			
Postal/Zip Code:		Country:	
Phone: ( )			

Note:
For purchases within U.S.A and Canada, please fax to Compex, Inc. at (714) 482 0332

For purchases outside U.S.A and Canada, please fax to Compex Systems Pte Ltd at (65) 6280-9947

Manual Number:
M-0478-V1.1C
Version 1.1
November 2005